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**BOND AS AN ALTERNATIVE FINANCING FOR BCA MORTGAGE
AND MORTGAGE PROCESSING SERVICE LEVEL IMPROVEMENTS
AT BCA CONSUMER LOAN BANDUNG OFFICE**

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Abstract— *Research is performed to find an alternative long-term funding to finance housing loans (mortgages) at PT. BCA, Tbk because BCA have a huge third party funds, but the majority of third-party funds in BCA consists of short-term funds, savings and current accounts. Currently the number of outstanding mortgages are still smaller than the number of long-term funds (time deposits), with projection the increase year on year mortgages much larger than the increase year on year in deposit, so that when the projections made using the average year on year in the last 5 years, the number of outstanding mortgage will exceed the total deposits in 2016. From the analysis of several alternative long-term financing, financing through the issuance of bonds is the most feasible funding for BCA, because of the results of analysis using Flexibility, Risk, Income, Control, and Timing (FRICT) framework, these bonds are best suited for mortgage financing. In addition to the search for alternative sources of long-term funds, in connection with the new regulations of Bank Indonesia on the regulations of the maximum LTV to 70%, causing an increase in mortgage applications were canceled by the prospective borrowers in the Bandung consumer loan office. BCA mortgages in order to continue to grow and compete with other banks need to be done to improve service level of mortgage 5 business days to 3 days, with a simplified mortgage process and change the mortgage regulations.*

Keywords: *FRICT framework for issuance bonds, improving service levels, change the mortgage regulations.*

1. Introduction

Until the end of the second quarter of 2012, the world economy is still beset by high uncertainty. In addition to the continuing negative perception in the global financial markets, the European economy is expected to experience a recession this year before gradually improved in 2013. It is expected that most countries in the world still experiencing slowdown during the second quarter of 2012. Meanwhile, amid the world economic slowdown impacting the performance deterioration of global trade, Indonesia's economic growth in the first quarter of 2012 could still reach 6.3%. Remained relatively high economic growth in Indonesia in the first quarter of 2012 was mainly supported by increased domestic demand, such as consumption and investment.

Consumer debt is one of the fastest growing forms of borrowing money around the globe. Research suggests that consumer loan is among the most profitable services a bank can offer. However, consumer loans can also be among the most costly and risky financial products that a bank sells because the financial condition of individuals and families can change so quickly due to illness, loss of employment, or other family tragedies. Loans to individuals and families may be divided into two groups, a residential mortgage loan and nonresidential loans Credit to finance the purchase of a home or to refinance house comes under the general label of residential mortgage loans. The loans usually gives rise to a long-term loan, typically bearing a term of 1 to 20 years and secured by the property itself.

PT. Bank Central Asia, Tbk.

PT Bank Central Asia Tbk (BCA) is one of the leading banks in Indonesia. BCA has nearly 11 million customer accounts served by 955 branches and 9592 ATM spread all over Indonesia. PT. BCA IPO in May 2000 and turned into a public company under the name. PT. BCA, Tbk. The number of issued shares with a nominal value of Rp 662.4 million. 1,400 per share which is 22% of the issued share capital and paid as part of the divestment of ownership of shares of the Republic of Indonesia, represented by IBRA. This public offering listed on the Jakarta Stock Exchange and Surabaya Stock Exchange on May 31, 2000.

PT. BCA, Tbk is currently listed as the largest private bank in Indonesia both assets, financial condition, number of customers, and the number of branches. Meanwhile, when compared with the overall bank assets in Indonesia, PT. BCA, Tbk is the third largest bank after PT. Bank Mandiri Tbk and PT. BRI Tbk both state government banks. Currently PT. BCA, Tbk based in Jakarta with headquarters in BCA Tower , Grand Indonesia Complex, MH Thamrin streets Number 1 Central Jakarta.

In the first semester 2012, BCA recorded a significant growth in all segments of loan in the amount of 41.5% YoY. Loan portfolio grew by Rp 66.3 trillion to Rp 226.0 trillion in June 2012. Consumer loan increased by more than 50% YoY to Rp 60.0 trillion, driven primarily by growth in mortgage loans portfolio (mortgage) by 73.5% YoY to Rp 36.5 trillion. BCA consolidating its position as a leader in the distribution of mortgages by launching a program with a fixed rate mortgage of 8% pa for a period of 55 months in February 2012.

BCA has long been aware of the strong potential growth consumer market segments in Indonesia. Continue strengthening of consumption patterns that are dominated by the population of Indonesia is very young age plays an important role in maintaining the resilience performance Indonesia amid weakening global economy in 2007. Individual consumer customer segment also provides an attractive opportunity for diversification of distribution collateral-based loans, which often times safer in the current economic conditions tend to weaken.

Over the last three years, BCA has taken proactive steps to Banks are strategically positioned to achieve optimal growth in consumer customer segments individual. Unit Business Loan Consumer (UBKK) responsibility for the development of mortgage (KPR). To support the distribution of mortgages in big cities in Indonesia, UBKK establish consumer loan agency, in several major cities in Indonesia, which was first established the Office of Consumer Loan in Surabaya (KKKS), after KKKS in August 2008 established the Office of Consumer Loan in Bandung by the name of the Bandung Consumer loan office (KKKB).

KKKB tasked with marketing, mortgage loan processing and administration of mortgages in Bandung surrounding areas.

Business Issue :

- Miss match financing
BCA is known to have low cost funds such as savings and current accounts, but the fund have miss match financing risk because short-term third-party funds to finance long-term loans
- Mortgage process in BCA very difficult
From various sources, the information obtained in the BCA, mortgage process is very difficult and the requirements are very strict.
- SE Bank Indonesia No 14 / 10 / DPNP : regulation for loan to value and down payment mortgages and vehicle loans

A. Conceptual Framework

The mortgage loans in the BCA aims to improve profitability, with measured credit risks

There are four stages in the mortgage process, entry applications (marketing), process analysis, administration and maintain existing mortgage. The four stages will run sequentially and can not

overlapping at any stage, there are important things that are very influential on the stage as shown in the following framework :

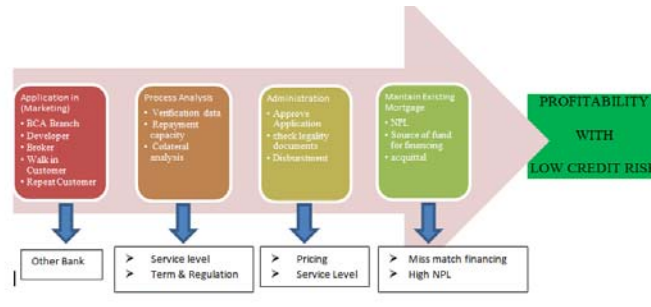


Figure 1. Conceptual framework mortgage proces

B. Data Collection and Analysis

Based on the results of Appraisal in the Bandung city in 2005 - September 2012, from sampling 30 sites in the city seen land prices rise significantly in Bandung, in 2011 - September 2012, in some locations land to rise above 30%.

Appraisal Assessment results at 30 prime locations in the city can be seen from the table below:

Table 1. Land Price in Bandung 2005 - 2012 (in million Rp)

	Address	2005-2006	2007	2008	2009	2010	2011	2012
1	Komp Pasiruyu	1.400.000	1.500.000	1.600.000	1.700.000	2.200.000	2.300.000	3.100.000
2	Komp Kalliat Indah	1.200.000	1.300.000	1.500.000	2.050.000	2.050.000	2.050.000	2.500.000
3	Perum Antapani	1.300.000	1.100.000	1.300.000	1.500.000	1.700.000	2.000.000	2.500.000
4	Pajajaran	2.300.000	2.200.000	2.500.000	3.000.000	4.500.000	5.000.000	6.000.000
5	Komp sumbasari	1.100.000	1.500.000	2.000.000	2.100.000	2.200.000	2.500.000	2.600.000
6	Komp Gatununggal	3.300.000	3.000.000	3.100.000	3.100.000	3.200.000	3.300.000	3.500.000
7	Apartemen Inaya			10.000.000	12.000.000	12.000.000	13.000.000	13.000.000
8	Buahbatu	4.250.000	5.000.000	6.000.000	6.000.000	6.000.000	6.000.000	8.000.000
9	Komp taman cibaduyut	900.000	750.000	900.000	1.000.000	1.100.000	1.200.000	1.300.000
10	Komp taman mutiara	500.000	900.000	1.100.000	1.300.000	1.350.000	1.700.000	1.800.000
11	Komp singgasana	1.750.000	1.950.000	2.300.000	2.500.000	2.600.000	3.000.000	4.000.000
12	Bukit lilar	700.000	800.000	1.200.000	1.200.000	1.500.000	1.700.000	2.000.000
13	Cigading	1.700.000	1.500.000	2.000.000	2.000.000	2.000.000	2.300.000	3.000.000
14	Kembar	1.500.000	1.600.000	1.600.000	2.000.000	2.200.000	2.300.000	2.500.000
15	Taman holls	900.000	1.000.000	1.200.000	1.400.000	1.000.000	1.700.000	2.000.000
16	Arjuneck	3.300.000	3.000.000	6.000.000	6.000.000	6.500.000	7.000.000	10.000.000
17	Kota baru	1.250.000	1.500.000	1.500.000	1.700.000	2.000.000	2.500.000	3.000.000
18	Komp pinus regency	700.000	1.000.000	1.400.000	1.400.000	1.500.000	2.000.000	2.500.000
19	Cinaneuk	5.300.000	5.500.000	6.000.000	6.500.000	7.200.000	9.000.000	10.000.000
20	Komp nusa hijau	1.300.000	1.000.000	1.200.000	1.500.000	1.700.000	1.800.000	2.200.000
21	H Juanda	5.300.000	5.500.000	7.500.000	7.500.000	7.500.000	7.500.000	12.000.000
22	Taman Kopo Indah	900.000	1.100.000	1.400.000	1.400.000	1.500.000	1.500.000	2.000.000
23	Mekawangi	1.500.000	1.600.000	2.200.000	2.600.000	3.000.000	3.000.000	4.000.000
24	Schraduta	2.500.000	2.600.000	2.600.000	3.300.000	3.360.000	3.600.000	4.800.000
25	Tuangga	2.100.000	2.200.000	2.200.000	2.700.000	3.000.000	3.200.000	3.300.000
26	Sukawana	2.300.000	2.300.000	3.000.000	3.200.000	3.500.000	3.800.000	4.000.000
27	Kopo pem al	950.000	900.000	1.000.000	1.100.000	1.250.000	1.400.000	1.500.000
28	Babakan jeuk	2.300.000	2.500.000	2.700.000	3.200.000	4.200.000	4.700.000	4.800.000
29	Komp margahayu raya	900.000	900.000	1.200.000	1.300.000	1.300.000	1.600.000	1.700.000
30	City Central	4.300.000	4.500.000	6.000.000	6.500.000	6.500.000	7.000.000	8.500.000

From the data of land price increases that occurred in the city of Bandung in some locations have seen gains over a reasonable limit (an increase of about 10% - 15% per year), so this increase could increase the risk of loan at the bank. Office of Consumer Loan Bandung (KKKB) was established in August 2008, to process mortgages in Bandung. At the time of its inception in 2008, the average number of admission application only 70 applications per month with a total mortgages disburse during the year 2008 amounted to Rp. 30.038 billion.

In 2012 (data up to September 2012) the number of admission application as many as 320 applications per month, with a total nominal mortgage that disburse until September 2012 amounting to Rp 1.124 trillion. An increase of over 3600%.

Table 2. Mortgage Application in KKKB 2008 – 2012

Year	2008	%	2009	%	2010	%	2011	%	2012	%
Approve	150	42,86%	581	39,34%	766	47,28%	1.249	47,44%	1.331	46,39%
Reject	121	34,57%	630	42,65%	361	22,28%	295	11,20%	273	9,52%
Cancel	79	22,57%	266	18,01%	493	30,43%	1.089	41,36%	1.265	44,09%
Total	350	100%	1.477	100%	1.620	100%	2.633	100%	2.869	100%

Based on the data in KKKB, non-performing mortgage loans, during the year 2008 - 2012 is very low, as can be seen from the following table:

Table 3. Non performing loan KKKB 2008 – 2012 (in million Rp)

Years	NPL	Total O/S	Rate
2008	7,027.15	490,550.00	1.43%
2009	6,376.62	629,710.00	1.01%
2010	4,949.01	814,840.00	0.61%
2011	2,812.30	1,340,354.00	0.21%
2012 *	4,149.74	2,070,927.00	0.20%

But since the regulation of Bank Indonesia force in June 2012, a decline in the application entry, is very significant, in August 2012 the number of mortgage applications in only about 8 applications entered per day. A decline in the total application entry in August of 170% compared to the total application entry in July 2012. The number of approved applications also decreased significantly from 190 applications were approved in July 2012, being only 63 incoming applications approved in August 2012.

Table 4. The number of mortgage admission applications

	Jan	Feb	Mar	Apr	May	Jun	Jul	Agst	Sep
Approved	81	110	206	212	235	160	190	63	74
Rejected	23	16	37	42	49	22	38	24	22
Cancel	74	111	141	181	174	158	236	86	104
total	178	237	384	435	458	340	464	173	200
Days Avg	8,9	11,85	19,2	21,8	23	17	23	8,65	10

C. Fish bone analysis Low Approval Rate

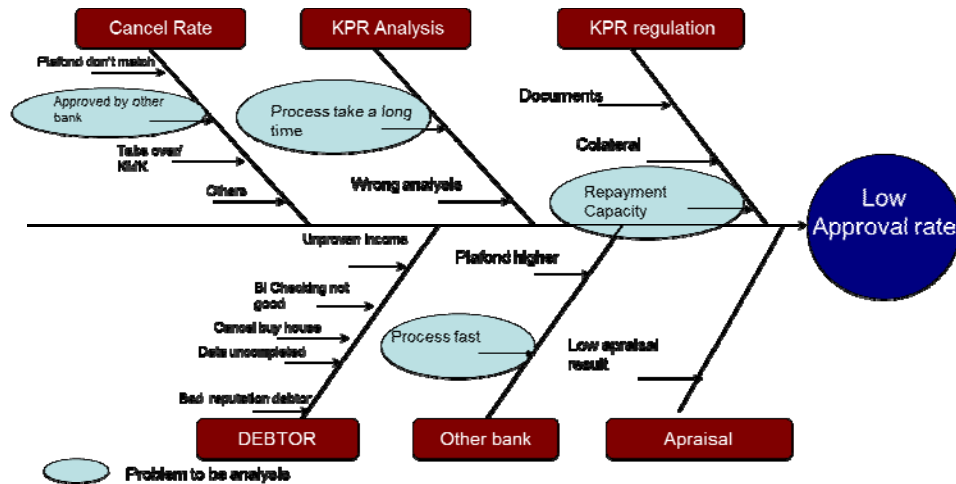


Figure 2. Fish bone analysis Low Approval Rate

D. Mortgage Financing

In accordance with banking intermediation, the main source of funds for mortgage financing from third-party funds that have been collected. BCA have a huge third party funds, but the majority of third-party funds in BCA consists of short-term funds, savings and current accounts. Currently the number of outstanding mortgages are still smaller than the number of long-term funds (time deposits), but the increase YOY mortgages much larger than the increase in YoY deposit.

Table 5. YOY Mortgage increase

	June 2007	June 2008	June 2009	June 2010	June 2011	June 2012	Average
Total O/S (Rp. Trillion)	6.400	9.400	10.600	15.392	21.026	36.487	
YOY increase		46,88%	12,77%	45,21%	36,60%	73,53%	43,00%

Source : BCA annual report 2007 – 2012

Table 6. YOY Time Deposit & Third Party funds (DPK) increase

	June 2008	June 2009	June 2010	June 2011	June 2012	Average
Time Deposit(Rp. trillion)	45.986	57.612	68.033	64.711	76.036	
YOY TD increase		25,28%	18,09%	-4,88%	17,50%	14,00%
Total DPK (Rp. trillion)	190.464	219.406	255.030	285.686	341.147	
YOY DPK increase		15,20%	16,24%	12,02%	19,41%	15,72%

Source : BCA annual report 2007 – 2012

Table 7. Projection Analysis Mortgage Amount 2013

	June 2012	June 2013*	June 2013**	June 2013***
Number of Customer Accounts	72.110	81.430	103.510	112.110
Total O/S (Rp. trillion)	36.487	41.147	52.187	56.500
Average Loans (Rp. Million)	506	500	500	500

*** Optimistic Assumption YOY 2013 increase 55% based on average YOY 2010 - 2012.

** Moderate Assumption YOY 2013 increase 43% based on average YOY 2007 - 2012.

* Pesimistic Assumption YOY 2013 increase 12.77% based on minimum YOY 2007 - 2012 (YOY 2009).

Table 8. Projection Mortgage 2013 – 2017

	June 2012	June 2013	June 2014	June 2015	June 2016	June 2017
Total O/S (Rp. trillion)	36.487	52.187	74.627	106.717	152.606	218.226
Average Loans (Rp. Million)	506	500	500	500	500	500
Number of Customer Accounts	72.110	103.510	149.255	213.434	305.211	436.452

Table 9. Projection Time Deposit & Third Party Funds 2013 – 2017

	June 2012	June 2013	June 2014	June 2015	June 2016	June 2017
Time Deposit (Rp. trillion)	76.036	86.681	98.816	112.651	128.422	146.401
Total DPK (Rp. trillion)	341.147	394.775	456.834	528.648	611.752	707.919

Mortgages are long-term loans to avoid mismatch financing, mortgage financing used to fund long-term third party like time deposit. From the results of the comparison between tables 8 and 9, corresponding projection in 2016, outstanding loan of Rp. 152.606 trillion and time deposits only Rp. 128.422 trillion, so the outstanding mortgage exceeds the amount of deposits in the BCA Rp. 24.184 trillion, necessitating an alternative long-term financing to offset the increase mortgages.

3. Business Solution

There are several stages in calculating the interest rate, the first thing is to do the calculation how much the cost of fund of funds that will be used to finance loans. The cheaper cost of funds of existing funds will help in regulating how much the interest rate and the profit margins to be achieved.

In determining the interest rate must be considered three things:

1. Base Lending Rate

Calculation Base Lending Rate BCA per June 2012 as follows:

Table 10. Base Lending Rate Mortgage

	IDR
Cost of Funds (Jun'12)	2.32%
GWM (IDR = 8%)	0.19%
Cash (IDR=3 %) ¹⁾	0.07%
Fee government guarantee (LPS)	0.20%
a. Cost of Loanable Fund	2.78%
b. Other Cost	2.00%
- PPAP	1.00%
- Overhead ²⁾	1.00%
c. Total Cost (a +b)	4.78%
d. Profit Margin (ROA = 3.5%) ³⁾	3.50%
Base Lending Rate (c + d)	8.28%
Note :	
1) Cash Ratio based actual June'12 (Cash Rp)	
2) Based on average overhead	
3) Based on financial statement 2012	

Usually the Base Lending Rate is used to determine the floating rate that will be set for the debtor, floating rate mortgage BCA is currently at 11%.

2. Weighted Average Cost of Capital (WACC)

WACC = Debt * COD * (1 - T) + equity * Cost of Equity

- Total Loans (Third party Fund / DPK) Rp. 323.628 Trillion by financial statements. BCA, tbk in 2011 composition of total debt + equity 88.7%
- Total Capital Rp. 41.26 Trillion by financial statements. Tbk BCA in 2011 composition of total debt + equity 11.3%
- Cost of debt (COD) is used Cost Of Fund (COF) PT. BCA in June 2012 amounted to 2.32%
- Government income tax final calculations for the limited company of by 25%
- Beta 0.75 based on the average of Aswath Damodaran banking industry
- Return Market return by average IDX 2007 - 2011 at 39.61 %
- Risk Free market according SBI at 5.75%
- Cost of equity :

$$R_f + b * (R_m - R_f) = 5.75\% + 0.75 (39.61\% - 5.75\%) = 31.15\%$$

$$WACC = (88.7\% * 2.32\% * (1 - 25\%)) + (11.3\% * 31.15\%)$$

$$WACC = 5.06\%$$

WACC calculation BCA in June 2012 amounted to 5.06 %

3. Cost Plus Model

Many consumer loans are priced off cost rate with a profit margin, overhead cost and risk premium :

Interest rate = Cost of fund + overhead cost + risk premium + desired profit margin.

- BCA COF June 2012 = 2.32%
- Overhead cost max 1 %

- Risk premium 1% Bank Indonesia pursuant to current loan provisioning at least 1% of the Outstanding Loan, before deducting the value of collateral (NPL gross KKKB BCA only 0,2%, NPL Netto BCA Loans 2011 only 0,2%)
 - Desired profit margin 5% (1% will charge as commitment fee, when sign mortgage)
- Interest rate = 2.32 % + 1 % + 1 % + 4 %
= 7.32 %

From the calculation above, the mortgage is still promising a sizable profit, with risk measured, because mortgage insurance is a solid guarantee and a maximum Loan To Value in accordance with Bank Indonesia regulation is only 70%.

Sources of mortgage funds

There are 3 alternative long term financing :

1. Equity

Currently BCA total equity of Rp 41.223 trillion, from 3 possible addition of equity.

There are 3 ways to add Equity

- a) Request additional paid-in capital to shareholders, are likely to be rejected because the funds required is large, the current BCA paid-up capital of only Rp. 1.522 trillion and a premium for agio of Rp. 3.105 trillion, a far cry from the funds needed.
- b) Additional retained earnings is also difficult because the total accumulated retained earnings now IDR. 36.037 trillion, with a projected annual earnings BCA Rp. 10 Trillion and retained earnings by 25% of the total income, for the next 5 years the funds that can be collected only around Rp. 12.5 trillion, still not enough to meet the requirement of funds for mortgage financing.
- c) Issue new stock to sell are likely to be rejected too by shareholders because they share will be diluted. To financing Rp. 25 Trillion, assuming stock price Rp 10.000/ share, need to issue 2,5 billion new stock, total BCA number of shares will add 10,14%.

Besides asking for additional funds from the capital paid up or increase the retained earnings will have a tough challenge from shareholders because they certainly do not want to enlarge equity or reduce the capital dividend they can receive.

2. Loans

As of June 2012 inter-bank lending rate for overnight in Indonesia amounted to 4,012% and for 12-month loans at 5,327%. The loan interest rate in Indonesia is the longest period of time is only 12 months so it is not suitable for mortgage financing. Meanwhile, when seeking loans from abroad, although lower interest rates and longer duration, there are exchange rate risks as loans from foreign currency while all mortgage loans are denominated in rupiah. Loans from other parties are also not possible at this time.

3. Bonds

Bonds are long-term financing instruments, so the bond is suitable financing alternatives to fund mortgages. Only the interest for these bonds is higher than the interest of third party funds collected by the bank must be considered carefully.

The average bond from a company in Indonesia with a rating equal to the BCA (AAA) is in the range of 6% - 10% depending on the period and the issuance of bonds. When look at the comparison of the bonds issued by the government of the amount of coupons are as follows:

- FR0066 remaining term of approximately 5 years interest rate of 4.67%
- FR0063 remaining term of approximately 10 years interest rate of 5.04%
- FR0064 remaining term of approximately 15 years interest rate of 5.8%
- FR0065 remaining term of approximately 20 years interest rate of 6.1%

PT BCA Finance the subsidiary of PT Bank Central Asia Tbk, issued bonds IV in 2012. The fourth bond is issued by BCA Finance's Rating Outlook Stable AA + from PT Pemeringkat Securities Indonesia (Pefindo) and AA + (ind) from Fitch Ratings.

The rate of interest on these bonds is:

- Series A 6.50 percent with a tenor of 370 days
- Series B 7.00 percent with a tenor of 18 months
- Series C 7.45 percent with a tenor of 24 months
- Series D 7.70 percent with a tenor of 36 months
- Series E 8.00 percent with a tenor of 48 months.

From the two comparisons above, the interest rate bonds issued by the BCA, should be higher than the interest rate ORI but lower than the interest rates on BCA Finance bonds, a range of interest rates that can be used are as follows:

- Bonds A with a maturity of 5 years interest rate of 6.00 to 6.50% (MTM)
- Bonds B with a maturity of 10-year interest rate of 6.50% - 7.00% (MTM)
- Bonds C with a maturity of 15-year interest rate of 7.00% - 7.50% (LTM)
- Bonds D with a maturity of 20-year interest rate of 7.50% - 8.00% (LTM)

With the following considerations:

1. The interest rate for a period ORI 5-20 years are in the range of 4.67% - 6.10%.
2. The interest rate BCA Finance as a subsidiary of the company that are rated lower than the BCA for a period of 1-4 years are in the range of 6.5% - 8.00% experienced excess supply of bond buyers.
3. The interest rate of Bank Indonesia (SBI) is 5.75%, so the interest rate of the bond BCA should be higher than SBI, because the level of risk is greater than SBI & ORI.
4. BCA mortgage interest rate today:
 - a. Fix rate 1 & 2 years at 7.5%
 - b. 5 year fixed rate at 8.5%
 - c. Floating interest rate of 11%

Of the three alternatives above, financing through bond financing is the most feasible.

Calculation of Interest and Emissions Fees of Bonds to be issued

Based on the data of existing mortgage loans in KKKB, obtained by borrowers who have mortgages spread as follows:

Table 11. Distribution by type of interest rate debtors

Interest	% number of Debtors	% Outstanding
Debtors Fixed Rate	54,15%	73,67%
Debtors Floating Ra	45,85%	26,33%
Total Debtors	100,00%	100,00%

Table 12. Division of debtors by Mortgage periods

Periods	% Number of Debtors	% Outstanding
< = 5 years	26,25%	28,89%
> 5 s.d 10 years	42,78%	40,12%
> 10 s.d 15 years	26,54%	26,14%
> 15 s.d 20 years	4,43%	4,85%
Total	100,00%	100,00%

The assumption of total bonds to be issued by Rp. 25 Trillion with a coupon payment every 3 months with the following :

- Bonds A with a maturity of 5 years, a number of 30% amounting to Rp. 7.5 trillion assuming 6.25% interest rate, total interest to be paid Rp. 1.563 trillion.
- Bonds B with a maturity of 10-year, a number of 40% amounting to Rp. 10 trillion assuming 6.75% interest rate, total interest to be paid Rp. 5.859 trillion.
- Bonds C with a maturity of 15 years, a number of 25% amounting to Rp 6.25 trillion, assuming 7.25% interest rate, total interest to be paid Rp. 6.25 Trillion.
- Bonds D with a maturity of 20 years, a number of 5% amounting to Rp. 1.25 trillion, assuming 7.75% interest rate, total interest to be paid Rp. 2.344 Trillion.

Total interest cost for one year are Rp. 1.5625 Trillion and total interest cost until maturity for all bonds are Rp 16.016 trillion

While NPV the interest cost , with interest payments every 3 months is as follows :

- NPV interest expense of bond A is Rp. 1.317 trillion
- NPV interest expense of bond B is Rp. 2.145 trillion
- NPV interest expense of bond C is Rp. 1.327 trillion
- NPV interest expense of bond D is Rp. 251 billion

NPV of total interest cost to maturity on these bonds is Rp 5.04 trillion.

Assumed the cost of issuance and underwriting of bonds at 1% of the value of bonds amounting to Rp 25 trillion then the fee is Rp 250 billion, the total cost for these bonds is Rp. 5.290 trillion.

FRICT framework

The issuance of bonds will change the financial structure in the BCA. FRICT framework can use To analyze wheter these issuance bonds are appropriate or not.

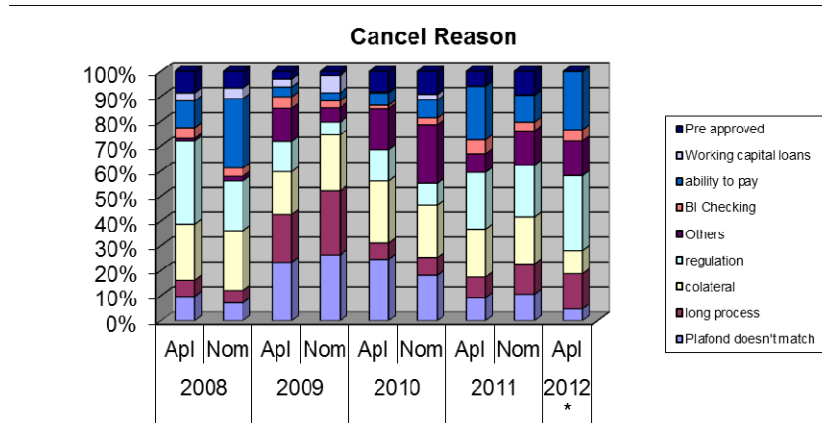
Table 13. FRICT framework BCA bonds

	Issue Bond Rp. 25 Trillion	No issue Bond
Flexibility	High	Medium (short term funds for long term loans)
	AAA debt rating	AAA debt rating
	Rp. 25 Trillion reserves fund for long term loan	No fund reserves for long term loan
Risk	Low	Very Low
	EBIT coverage 8.61 *	EBIT coverage very high (no debt)
Income	Good to High	Good
	DCF Value 2016 = Rp. 2.366 / share **	DCF Value 2016 = Rp. 2.063 / share ***
	Net income 2016 Rp. 13.45 Trillion **	Net income 2016 Rp. 13.26 Trillion ***
	Tax shield 2015 Rp. 195 Billion *	Tax shield 2015 Rp. 0 *
	EPS 2016 Rp. 546	EPS 2016 Rp. 538
Control	Covenant very low	No Covenant
	No voting dilution	No voting dilution
Timing	Interest rate very low	Interest rate very low
	The public view of the BCA is great because BCA is known as a conservative bank when release credit	The public view of the BCA is great because BCA is known as a conservative bank when release credit
	Bond coupon will pay every 3 months, but the interest for mortgage pay every month, BCA has advantages to collect interest for mortgage in front off than pay bond coupon ****	

Strategy to improve service levels and policy changes to reduce the mortgage loan application which was canceled by the debtor

There are two important things to be considered in the filed mortgages are:

1. Pricing
Pricing is the interest rate, the cost of provision, administration fee etc. Currently pricing for most mortgage banks are not much different.
2. Service level
Service level is the standard number of days required in the processing of the mortgage from the complete data to the loan decision.



From the table above reasons cancel, according to data in 2012, there are several reasons that often lead debtor to cancel the request, that is one reason related to the service level and the three reasons related to the regulations of mortgage BCA are:

1. Long process (service level) : 14.08%
2. Ability to pay : 23.25%
3. Regulation : 30.13
4. Plafond doesn't match : 4.69%

From the data that an application is canceled as above reason reaches 72% of total applications, 600 applications (from January - June 2012). There are some solutions that can be done to reduce the potential borrowers who cancel mortgage loans.

Improve Service levels

The processing of mortgages today are as follows:

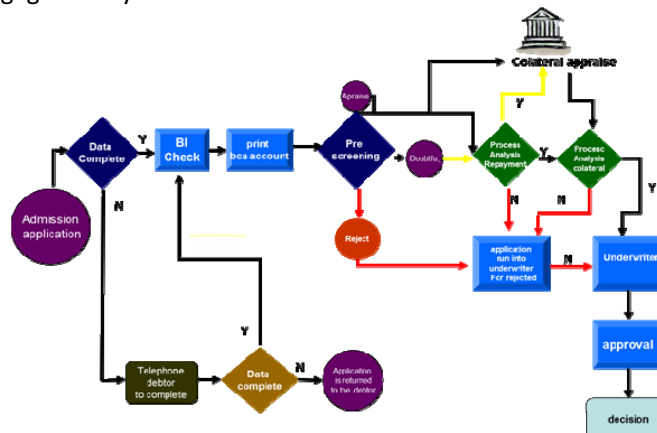


Figure 4. Secondary market mortgage processing

Processing of the current collateral valuation process by the independent Appraisal carried out after the pre screening it is usually necessary changes because appraisal fastest time 2 working days, so the process becomes longer processing. Service levels can be increased to 3 working days can be done with simplify the mortgage process.

Proposed changes to the processing of mortgage is as follows :

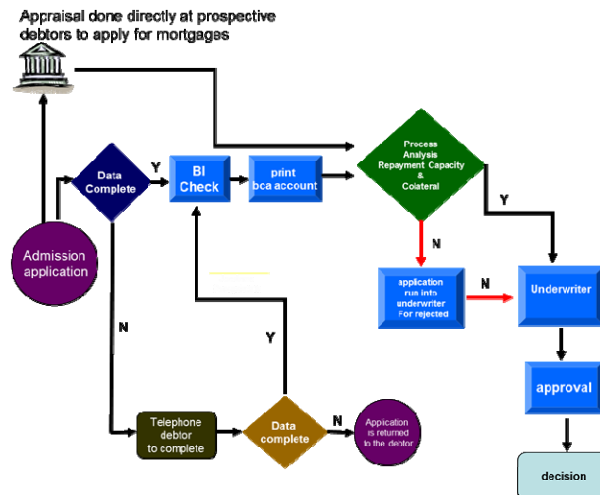


Figure 5. Secondary market mortgage processing change

Change the Mortgages regulation : Maximum ratio of installment provisions for employee, 1/3 of the gross salary

With the ever increasing land prices each year in table 1 and assuming salary will also increase every year, the maximum ratio of installment terms for these employees can be raised, as follows:

a. For employees who have a salary of < Rp. 10 million, installment of the ratio of employees, can be raised to 40%, with a consideration of the following calculation:

- 250 million loan ceiling (at least in the BCA)
- 15-year loan term (length of time taken by many mortgages in BCA)
- Mortgage rate at 8.5% effective / per year (interest rate, the existing program)
- Amount mortgage installments of Rp. 2,461,849

With rules maximum installment ratio 33.3%, minimum wage debtors approximately Rp. 7.4 million, assuming the household expenses if the debtor is married to one wife and two children of Rp. 2,500,000 , a surplus of borrowers after deducting household expenses and mortgage installments are still quite large amount of Rp. 2,438,151.

With the change in the maximum ratio of installment to 40%, a minimum wage debtors approximately Rp. 6,154,623, assuming the cost of the same household as above, the surplus of borrowers after deducting household expenses and mortgage installments still enough of Rp. 1,192,774

b. For employees who have a salary >= Rp. 10 million, installment of the ratio of employees, can be raised to 50%, with a consideration of the following calculation:

- 500 million loan ceiling (for salaried >= Rp. 10 million, usually purchased larger homes of employees with salary < Rp. 10 million)
- 15-year loan term (length of time taken by many mortgages in BCA)
- lending rate at 8.5% effective / per year (interest rate, the existing program)
- Amount mortgage installments of Rp. 4,923,698

With rules maximum installment ratio 33.3%, minimum wage debtors approximately Rp. 14,785,880, assuming the household expenses if the debtor is married to one wife and two children of Rp. 4,000,000, a surplus of borrowers after deducting household expenses and mortgage installments are still quite large, amount of Rp. 5,862,182.

With the change in the ratio of installment to 50%, a minimum wage cadeb approximately Rp. 10 million (Rp. 9,847,396), assuming the cost of the same household as above, the surplus of borrowers after deducting household expenses and mortgage installments still enough of Rp. 1,076,302.

4. Conclusion and Implementation Plan

Implementation plan to improve service level and change the maximum installment ratio

With the increasing competition in the mortgage at the bank in Indonesia and the high rate at BCA canceled rate, increasing service levels and policy changes as a way to improve services to prospective mortgage borrowers, should be done starting in April 2013. To increase service levels to 3 working days for prospective borrowers who purchase homes from the secondary market to do starting in June 2013 with the following time schedule:

Table 14. Implementation plans service levels 3 working days

Initiative	Budget	Time schedule	PIC
- Socialization change the terms of payment in advance for appraisal	Rp. 250 Million	01-Mar-13 until 30-Apr-13	UBKK*
- Recruitment and training of new analyst staff according to projections mortgage budget		01-Mar-13 until 30-Apr-13	UBKK HCM**
- Add new computers	Rp. 5 Billion	01-Mar-13	Logistic
- Built new IT program to make process fast & accurate		until 30-Apr-13	IT
- Make procedure simple but GCG		30-Apr-13	UBKK
- Implementation Service level 3 work days	Rp. 1 billion	01-Jun-13	UBKK

Implementation Plan BCA Bonds Issuance

From the results of these projections, the issuance of bonds to do in 2015 accordance with the following schedule:

Table 15. Implementation plans bonds issuance

Initiative	Budget	Time schedule	PIC
- Calculation of the long-term shortage of funds based on the latest financial statement	Rp. 250 Million	1 Dec 2014	UBKK*
- Survey bonds rate and market demand in the Indonesian bond market		until	UWM**
	Rp. 750 Million	30-Jan-15	Finance
- Request shareholders permission to issuance bonds from (AGM)	Rp. 1 Billion	01-Feb-15	Finance
		Until	Director
- Selection of firms, notary, credit rating agency, accounting firm, and legal consultant for the issuance of bonds	Rp. 10 Billion	30-Mar-15	Law
- Handling permit issuance bonds of Bapepam, Indonesia banks and related institutions	Rp. 5 Billion		Finance Law, Audit
- Road show to BCA potential customers	Rp. 20 Billion	1 Apr 2015 –	UBKK
- Road show to potential buyers		30-Jun-15	UWM
- Issue BCA Bonds	Rp. 100 Billion	01-Jul-15	Finance Director UWM

Conclusion

Mortgages will continue to grow in line with the magnitude of the housing needs in Indonesia. Mortgages in BCA continues to show a very significant increase. This huge increase if not accompanied by appropriate funding can cause a miss match financing, so it takes a long-term funding alternatives to finance mortgage BCA.

Issuance of bonds to finance mortgages is the most favorable alternative and suitable for BCA.

- Bonds to be issued ordinary bonds with a fixed coupon rate and can be bought back by the BCA at a price agreed upon by the issuer and the bond holder.
- Bonds A & B to be issued in the form of MTM Bonds.
- Bonds C & D to be issued in the form of LTM Bonds
- When demand from BCA customers large enough, BCA can do private placement exclusively for BCA customer to buy bonds BCA

The new Indonesian bank regulation on the restriction maximum LTV to 70%, caused the risk level is lowered for mortgage financing, and all banks are the same in maximum LTV mortgages are offered to borrowers.

In addition to more intense competition and the level of mortgage interest rates prevailing, BCA should :

- Improve the service level agreement mortgages to customers who buy a home in the secondary market from 5 days to 3 days processing, with a few changes and simplify mortgage processing .
- Change the Mortgages regulation : raise maximum ratio of installment regulations for employee, 1/3 of the gross salary to 40% for employees who have a gross salary < Rp. 10 million and 50% for employees who have a gross salary ranging > = Rp. 10 million.

Improved service levels and rule changes must be done soon in order to keep the BCA as a private bank No. 1 in the distribution of mortgages and to become a market leader delivering mortgage bank in Indonesia.

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